



## Submission on the Draft Stage 6 Mathematics General 1 and 2 Syllabuses

### *Introduction*

The Mathematical Association of NSW is the only State wide association representing Mathematics teachers from early childhood through to post secondary. There are close to 1000 personal members and over 750 institutional members reaching most of the mathematics educators in NSW. MANSW is the largest mathematical educational professional body in NSW.

The information and suggestions featured in this submission are the views of the membership. These were obtained by means of two MANSW Forum events where members came to discuss and consider their reactions to the Draft Stage 6 Mathematics Syllabuses. One event focused on the General Mathematics 1 and General Mathematics 2 courses and the other addressed the three calculus courses; Mathematics Advanced, Extension 1 and Extension 2. On both occasions the discussion ranged over many aspects of the syllabuses with content, time allowance, technology and assessment featuring as similar themes and teacher concerns. An open response sheet was given to those who attended and to other members who wished to hand in written, more detailed responses. The key themes of the discussions and the written responses were collated and the overall evident issues are now being presented to the Board of Studies for consideration.

### *Mathematics General 1 and 2*

- Teachers' response to the provision of a common General Preliminary Course was positive
- The inclusion of Focus Studies was also seen as positive however, a number of concerns about programming, assessment and number of studies were raised.

### CONTENT

- There was a large body of opinion that, for the General Preliminary Course the indicative hours would be insufficient to address all of the content points as well as the two Focus Studies. It was suggested that one of the Focus Studies and/or some content should be removed.
- There was also concern that the volume and the level of some content in the Preliminary course would be difficult for those students who eventually moved on the General 1 in the HSC year to complete
- Many teachers suggested that, within the General Preliminary syllabus, 'dot points' should be marked with a symbol, as in the School Certificate 5.1, 5.2 and 5.3 pathways, to indicate those that were necessary for those proceeding to HSC General 2. This would help teachers to modify the content to fit needs of the students being taught.

- There were a number of strong opinions that as it stood the General 1 HSC course would be too hard for many of the students who opt to attempt this course. A fear that many of these students may end up as lower achievers in General 1 & 2 composite classes was expressed.

## FOCUS STUDIES

- There was some discussion about whether teachers should address all of the content ‘dot points’ before moving on the Focus Studies or if a Focus Study could be done over a longer length of time whilst proceeding with appropriate content. Some advice and suggestions on possible on programming of the Focus Studies would help teachers.
- A suggestion that instead of the terminology “prerequisite topics” it would be better to use “co-requisite topics” so that it could be seen that a Focus Study could be addressed concurrently with appropriate content
- Many teacher comments about the Focus Studies were about how these would be assessed. Would they be assessed in the HSC examination and would it be possible for students to have choice on the Focus Studies on which they answered questions?
- Some teachers felt that the Preliminary Focus Studies should be examined in the HSC and others were strongly opposed this

## ASSESSMENT

- The composition of the HSC examination was of concern to some teachers who felt that only HSC content should be examinable whilst others supported Preliminary material being included.
- There was comment and concern about the level at which General 2 was pitched, there was a fear that it was actually going to be harder than the present General Mathematics course.

## TECHNOLOGY

- The syllabus emphasis on the use of appropriate technology was noted and teachers were aware of the possibilities for their teaching and student learning. However there was great pressure for more specific information to be provided by the Board of Studies about the type and cost of Graphics Calculator that would be appropriate.
- The specification of the position on of the use of Graphics Calculators in both internal and external assessment was a matter of great concern for teachers who felt they should have this information at the earliest stage.
- It was noted that Technology is now a specific outcome, however how this will be assessed needs to be clarified.

## GLOSSARY

- There were a number of suggestions that there should be a comprehensive glossary of terms to help both teachers and students. It did not seem appropriate to rely on the various interpretations of the text books. This was seen as particularly important for NESB students.

## SUPPORT DOCUMENTS

- Programming advice in Support Documents was asked for and the feeling was that this needed to be provided early.

- Comprehensive support materials linking the outcomes to content, teaching strategies, work samples and assessment alternatives for each course are an essential part of the syllabus and are requested by teachers.

#### STUDENT PATHWAYS

- There were questions about how students who were following Pathways would negotiate the possibility of doing a HSC examination on the 'old syllabus' and then have to do an examination on the 'new syllabus' the following year. Schools will need advice on this.